

7-8

- 4

1.

500 10%-  
25%-

( )	
1.	2
2. $m(\text{BaCl}_2) = 500 \cdot 0,1 = 50$ ( )	2
3. $m(\text{BaCl}_2) = (50 + )$	2
4. $(500 + )$	2
5. $-(\text{BaCl}_2) = m(\text{BaCl}_2) / m( - )$	2
6. $0,25 = (50 + ) / (500 + )$	2
7. $: = 100; m(\text{BaCl}_2) = 100$	2
8. $\text{Ba}^{2+} + \text{H}_2\text{SO}_4 = \text{BaSO}_4 + 2\text{H}^+$ $\text{BaCl}_2 + \text{H}_2\text{SO}_4 = \text{BaSO}_4 + 2\text{HCl}$	2 1
9. $\text{Cl}^- + \text{AgNO}_3 = \text{AgCl} + \text{NO}_3^-$ $\text{BaCl}_2 + 2\text{AgNO}_3 = 2\text{AgCl} + \text{Ba}(\text{NO}_3)_2$	2 1
	20

2.

100 , 10%  
100  
10%

( )	
1. $m(\text{NH}_4)_2\text{CO}_3 = 100 \cdot 0,9 = 90$ . 10%, - 90%	2
2. $(\text{NH}_4)_2\text{CO}_3 = 96 /$	2
3. $n((\text{NH}_4)_2\text{CO}_3) = 90 / 96 / = 0,94$	2
4. $n(\text{N}) = 2n((\text{NH}_4)_2\text{CO}_3) = 2 \cdot 0,94 = 1,88$	3
5.	

$N(N) = n(N) \cdot N ; N(N) = 1,88 \cdot 6,02 \cdot 10^{23} = 1,13 \cdot 10^{24}$	<b>3</b>
6. $t^0$ $(NH_4)_2CO_3 = 2NH_3 + H_2O + CO_2$	<b>4</b>
7. $n((NH_4)_2CO_3) = n(CO_2) = 0,94$	<b>2</b>
8. $V(CO_2) = 0,94 \cdot 22,4 / = 21$	<b>2</b>
	<b>20</b>

## 3.

1.  $Fe_2O_3 + H_2 =$
2.  $NH_3 + O_2 =$
3.  $HBrO_3 + HBr$
4.  $Pb(NO_3)_2 + Na_2S =$
5.  $Na_2SO_4 + AgNO_3 =$
6.  $FeSO_4 + KOH =$
7.  $Al_2S_3 + H_2O =$
8.  $Mg + N_2 =$
9.  $Li_3N + H_2O =$
10.  $HCl + CrO_3 =$

( )	
1. $Fe_2O_3 + 3H_2 = 2Fe + 3H_2$	<b>2</b>
2. $4NH_3 + 3O_2 = 2N_2 + 6H_2O$	<b>2</b>
3. $HBrO_3 + 5HBr = 3Br_2 + 3H_2O$	<b>2</b>
4. $Pb(NO_3)_2 + Na_2S = PbS + 2NaNO_3$	<b>2</b>
5. $Na_2SO_4 + 2AgNO_3 = 2NaNO_3 + Ag_2SO_4$	<b>2</b>
6. $FeSO_4 + 2KOH = Fe(OH)_2 + K_2SO_4$	<b>2</b>
7. $Al_2S_3 + 6H_2O = 2Al(OH)_3 + 3H_2S$	<b>2</b>
8. $3Mg + N_2 = Mg_3N_2$	<b>2</b>
9. $Li_3N + 3H_2O = 3LiOH + NH_3$	<b>2</b>
10. $12HCl + 2CrO_3 = 3Cl_2 + 2CrCl_3 + 6H_2O$	<b>2</b>
	<b>20</b>

## 4.

- (IV) 100 ,
- 91% .
- :
1. .
  2. , ,
  3. (IV) ?
  4. , , .

:

( , )	
1. $\text{CaO} + \text{O}_2 = \text{Ca O}_3$ (1)	2
2. : $m( ) = 100 \cdot 0,91 = 91 ( )$ .	2
3. $n( ) = 91 : 56 / = 1,625$ .	2
4. $n( ) = n( \text{O}_3 ) = 1,625 ( 1 )$	2
5. $m( \text{O}_3 ) = 1,625 \cdot 100 / = 162,5$ .	2
6. $n( ) = n( \text{O}_2 ) = 1,625$ .	2
7. $V( \text{O}_2 ) = 1,625 \cdot 22,4 / = 36,4$ .	2
8. - ( ) <sub>2</sub> - $\text{SO}_4 \cdot 2$ <sub>2</sub> - <sub>3</sub>	2 2 2
	<b>20</b>

## 5.

- 1) , 2) , 3) (III), 4) :  
 5) (III), 6) (II), 7) , 8) ,  
 9) , 10) .  
 , - , - ?  
 :

( , )	
1. , $\text{K}_2\text{CrO}_4$ -	2
2. , $\text{K}_2\text{Cr}_2\text{O}_7$ -	2
3. (III), $\text{Cr}_2(\text{SO}_4)_3$ -	2
4. , $\text{Al}(\text{NO}_3)_3$ -	2
5. (III), $\text{FeCl}_3$ - -	2
6. (II), $\text{FeSO}_4$ - -	2
7. (II), $\text{CuSO}_4$ -	2
8. , $\text{KMnO}_4$ -	2
9. , $\text{K}_2\text{MnO}_4$ -	2
10. , $\text{I}_2$ - -	2
	<b>20</b>